Maintain extensive, permanent collection of information in a robust, portable structure

Provide virtual reference collection of microscope slides

Serve as a resource for teaching about internal structure of

### **Archives**

Represents a repository for photomicrographs and databases representing multiple entry keys

Incorporates data on "orphaned" United States Geological Survey collections (J. Wolfe), including woods of Fiji and New Caledonia, as well as Puerto Rico



Image collection archives photographs from recent systematic wood anatomy studies.

> Cornaceae Shuichi Noshiro - FFPRI Lauraceae H.G. Richter - BFH Leguminosae P. Gasson - Kew Sapindaceae René Klaassen - NHN

## Data

Over 5500 description records

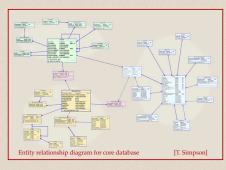
More than 250 angiosperm families and 2500 genera described

Some descriptions represent multiple species with similar anatomy



Original OPCN / GUESS dataset follows tradition of L. Chalk. Commonwealth Forestry Institute, Oxford

OPCN data encoded into robust, portable XML format



# **InsideWood:**

A new internet-accessible wood anatomy database

E.A. Wheeler<sup>1</sup>, T. D. Simpson<sup>1</sup>, S.L. Rodgers<sup>1</sup>, P.E. Gasson<sup>2</sup>, K.R. Brown<sup>1</sup>, J.A. Bartlett<sup>1</sup>, P. Baas<sup>3</sup>

<sup>1</sup> N.C. State University, Raleigh, N.C. 27695 <sup>2</sup> Micromorphology Section, Royal Botanic Gardens, Kew, U.K. <sup>3</sup> National Herbarium of The Netherlands, Leiden, The Netherlands

## Interface

Identify unknowns using either of two search protocols

Website uses IAWA standard wood anatomical terminology

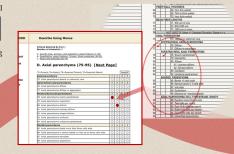
Retrieve descriptions in IAWA features

Can also browse taxa or search by keyword, including taxonomic and common names

Mirrored and preloaded for rapid response



Search Modern Wood Database page



Menu search option using established IAWA feature numbers

new, extensive, Internet-accessible wood anatomy reference, research, and teaching tool

## Results

Matching results are displayed alphabetically by family, with IAWA features present in each matching record displayed

Full description gives text for the IAWA features present, a list of references and wood samples used to create the description, and 'live' thumbnails of linked images

The initial search can be revised by 1) adding or removing mismatches between the unknown description and the database descriptions, 2) changing the unknown description by adding or deleting features used, or 3) restricting the search to selected families





Search results page and full description for selected record (circled)

#### InsideWood is a resource for mapping geographic distribution of wood anatomical features



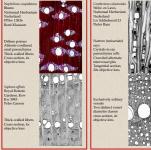
Global distribution of ring porous vs. diffuse porous woods

## **Images**

Over 13,000 archived digital image files as of October, 2004

Will be dynamically linked to descriptions

Each will possess rich, searchable metadata and keywords, including photographer's name and host institution, collection, specimen ID number, and technical









## Support

**National Science Foundation** BRC 0237368



Any opinions, findings, and conclusions or recommendations expressed in this material are those of the authors and do not necessarily reflect the views of the National Science Foundation.

### Acknowledgments Our sincere thanks to

Chris Bazzle, North Carolina State University Hans Beeckman, Royal Museum for Central Africa Herman Berkhoff, North Carolina State University Alan Coulson, University of South Carolina Sara Decherd, North Carolina State University Pierre Détienne, CIRAD Montpellier René Klaassen, Nationaal Herbarium Nederland Regis Miller, USDA Forest Service

Shuichi Noshiro, FFPRI Imogen Poole, University of Utrecht H.G. Richter, Universität Hamburg

Poster designed by J.A. Bartlett BFH











College of Natural Resources

